

PENDING CLAIMS
Application No. 10/047,987
Attorney Docket No. 05725.1020-00000
Filed: January 17, 2002

65. A structured composition comprising at least one liquid fatty phase comprising at least one fluoro oil, wherein the at least one liquid fatty phase is structured with at least one polymer with a weight-average molecular mass of less than or equal to 1,000,000, comprising:

a) a polymer skeleton comprising hydrocarbon-based repeating units, said units comprising at least one hetero atom; and

b) optionally at least one fatty chain chosen from at least one pendent fatty chain and at least one terminal fatty chain, wherein the at least one fatty chain comprises from 6 to 120 carbon atoms, is bonded to the hydrocarbon-based units, and is optionally functionalized, and

wherein the at least one liquid fatty phase and the at least one polymer form a physiologically acceptable medium.

66. The composition according to Claim 65, wherein the weight-average molecular mass of the at least one polymer is less than or equal to 500,000.

67. The composition according to Claim 66, wherein the weight-average molecular mass of the at least one polymer is less than or equal to 100,000.

68. The composition according to Claim 65, wherein the at least one hetero atom is a nitrogen atom.

69. The composition according to Claim 65, wherein the hydrocarbon-based units comprising at least one hetero atom are chosen from amide groups.

70. The composition according to Claim 65, wherein the at least one fatty chain is present in an amount ranging from 40% to 98% of a total number of the hydrocarbon-based repeating units and the at least one fatty chain.

71. The composition according to Claim 70, wherein the at least one fatty chain is present in an amount ranging from 50% to 95% of a total number of the hydrocarbon-based repeating units and the at least one fatty chain.

72. The composition according to Claim 65, wherein the at least one fatty chain is chosen from at least one pendent fatty chain, and further wherein the at least one pendent fatty chain is linked directly to at least one of said at least one hetero atom.

73. The composition according to Claim 65, wherein the polymer skeleton of the at least one polymer comprises at least one amide repeating unit in said skeleton.

74. The composition according to Claim 73, wherein the at least one fatty chain comprises from 8 to 120 carbon atoms and is linked to the at least one amide repeating unit.

75. The composition according to Claim 74, wherein the weight-average molecular mass of the polymer is less than or equal to 500,000.

76. The composition according to Claim 75, wherein the weight-average molecular mass of the polymer is less than or equal to 100,000.

77. The composition according to Claim 74, wherein the at least one fatty chain is present in an amount ranging from 40% to 98% of a total number of the at least one amide repeating unit and the at least one fatty chain.

78. The composition according to Claim 77, wherein the at least one fatty chain is present in an amount ranging from 50% to 95% of a total number of the at least one amide repeating unit and the at least one fatty chain.

79. The composition according to Claim 74, wherein said at least one fatty chain is chosen from at least one pendent fatty chain, and further wherein the at least one pendent fatty chain is linked directly to at least one of the nitrogen atoms of the at least one amide repeating unit.

80. The composition according to Claim 65, wherein the weight-average molecular mass of the at least one polymer ranges from 1,000 to 30,000.

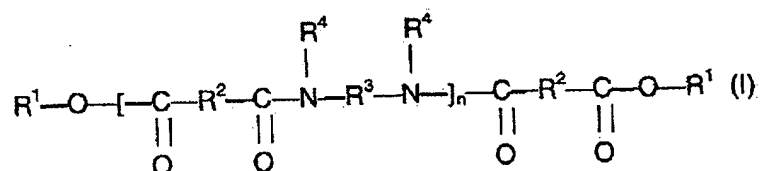
81. The composition according to Claim 80, wherein the weight-average molecular mass of the at least one polymer ranges from 2,000 to 10,000.

82. The composition according to Claim 65, wherein said at least one fatty chain is chosen from at least one terminal fatty chain, and further wherein the at least one terminal fatty chain is linked to the skeleton via at least one bonding group.

83. The composition according to Claim 82, wherein the at least one bonding group comprises an ester group.

84. The composition according to Claim 65, wherein the at least one fatty chain contains from 12 to 68 carbon atoms.

85. The composition according to Claim 65, wherein the at least one polymer is chosen from polymers of formula (I):



wherein:

n is a number of amide units such that the ester groups are present in an amount ranging from 10% to 50% of the total number of ester and amide groups;

R¹ is independently chosen from alkyl and alkenyl groups containing at least 4 carbon atoms;

R² is independently chosen from C₄ to C₄₂ hydrocarbon-based groups, wherein 50% of the R² groups are chosen from C₃₀ to C₄₂ hydrocarbon-based groups;

R³ is independently chosen from organic groups containing at least 2 carbon atoms, hydrogen, and optionally at least one atom chosen from oxygen and nitrogen atoms; and

R⁴ is independently chosen from hydrogen, C₁ to C₁₀ alkyl groups, and a direct bond to R³ or to another R⁴, such that the nitrogen atom to which R³ and R⁴ are both attached forms part of a heterocyclic structure defined by R⁴-N-R³, wherein at least 50% of the R⁴ groups are hydrogen.

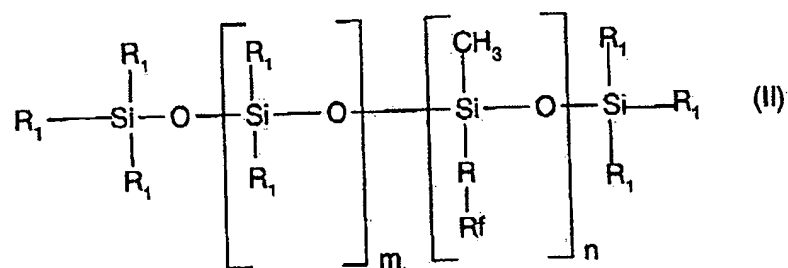
86. The composition according to Claim 85, wherein R¹ is independently chosen from C₁₂ to C₂₂ alkyl groups.

87. The composition according to Claim 85, wherein R² is independently chosen from C₃₀ to C₄₂ hydrocarbon-based groups.

88. The composition according to Claim 65, wherein the at least one polymer is present in an amount ranging from 0.5% to 80% of the total weight of the composition.

89. The composition according to Claim 88, wherein the at least one polymer is present in an amount ranging from 5% to 40% of the total weight of the composition.

90. The composition according to Claim 65, wherein the at least one fluoro oil is chosen from fluorosilicone compounds of formula (II):



wherein:

R is chosen from linear and branched divalent alkyl groups containing from 1 to 6 carbon atoms;

R_f is a fluoroalkyl radical containing from 1 to 9 carbon atoms;

R₁ is independently chosen from C₁-C₂₀ alkyl radicals, hydroxyl radicals, and phenyl radicals;

m ranges from 0 to 150; and

n ranges from 1 to 300.

91. The composition according to Claim 90, wherein the divalent alkyl groups are chosen from methyl, ethyl, propyl, and butyl groups.

92. The composition according to Claim 90, wherein Rf is a perfluoroalkyl radical.

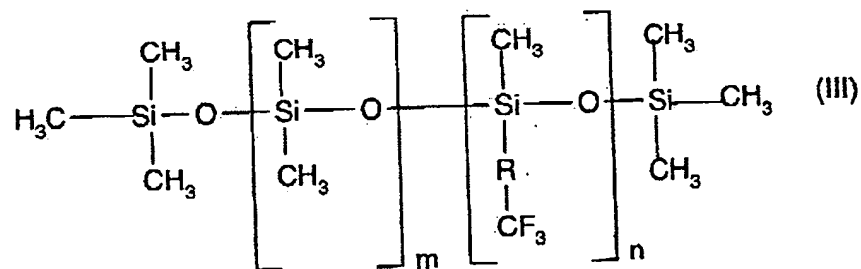
93. The composition according to Claim 90, wherein the fluoroalkyl radical contains from 1 to 4 carbon atoms.

94. The composition according to Claim 90, wherein m ranges from 20 to 100.

95. The composition according to Claim 90, wherein n ranges from 1 to 100.

96. The composition according to Claim 90, wherein each of the R₁ groups is a methyl radical.

97. The composition according to Claim 65, wherein the at least one fluoro oil is chosen from fluorosilicone compounds of formula (III) below:



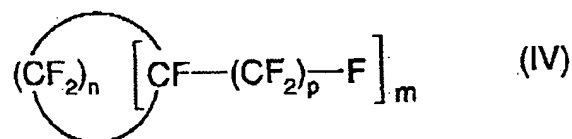
wherein:

R is chosen from divalent methyl, ethyl, propyl, and butyl groups;

m ranges from 0 to 80; and

n ranges from 1 to 30.

98. The composition according to Claim 65, wherein the at least one fluoro oil is chosen from perfluorocycloalkyls of formula (IV):



wherein:

n is equal to 4 or 5;

m is equal to 1 or 2; and

p ranges from 1 to 3;

with the proviso that when $m = 2$, the $\text{(CF}_2\text{)}_p\text{-F}$ groups are not necessarily alpha to each other.

99. The composition according to Claim 98, wherein the at least one fluoro oil is chosen from perfluoromethylcyclopentane and perfluorodimethylcyclobutane.

100. The composition according to Claim 65, wherein the at least one fluoro oil is chosen from fluoroalkyl and heterofluoroalkyl compounds of formula (V):



wherein:

t is 0 or 1;

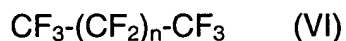
n ranges from 0 to 3;

X is chosen from linear and branched divalent perfluoroalkyl radicals containing from 2 to 5 carbon atoms; and

Z is chosen from O, S, NH, $-(\text{CH}_2)_n\text{-CH}_3$, and $-(\text{CF}_2)_m\text{-CF}_3$, wherein m ranges from 2 to 5.

101. The composition according to Claim 100, wherein the at least one fluoro oil is chosen from methoxynonafluorobutane and ethoxynonafluorobutane.

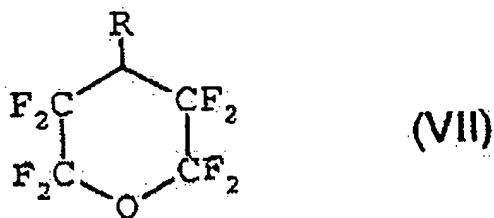
102. The composition according to Claim 65, wherein the at least one fluoro oil is chosen from perfluoroalkane compounds of formula (VI):



wherein n ranges from 2 to 6.

103. The composition according to Claim 102, wherein the at least one fluoro oil is chosen from dodecafluoropentane and tetradecafluorohexane.

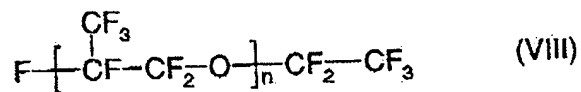
104. The composition according to Claim 65, wherein the at least one fluoro oil is chosen from perfluoromorpholine derivatives of formula (VII):



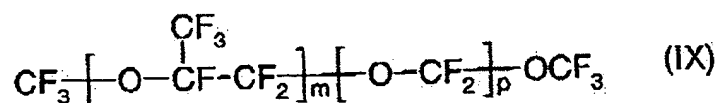
wherein R is chosen from C₁-C₄ perfluoroalkyl radicals.

105. The composition according to Claim 104, wherein the at least one fluoro oil is chosen from 4-trifluoromethylperfluoromorpholine and 4-pentafluoroethylperfluoromorpholine.

106. The composition according to Claim 65, wherein the at least one fluoro oil is chosen from the perfluoropolyethers of formulae (VIII) and (IX):

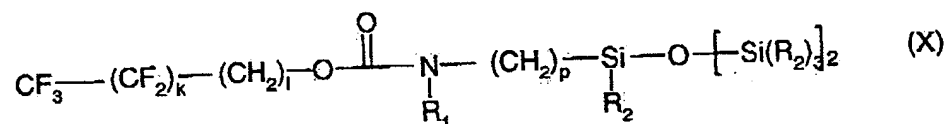


wherein n ranges from 7 to 30; and



wherein the ratio m/p ranges from 20 to 40, and the molecular weight ranges from 500 to 20,000.

107. The composition according to Claim 65, wherein the at least one fluoro oil is chosen from fluorosilicone compounds of formula (X):



wherein:

k ranges from 1 to 17;

l ranges from 1 to 18;

p ranges from 1 to 6;

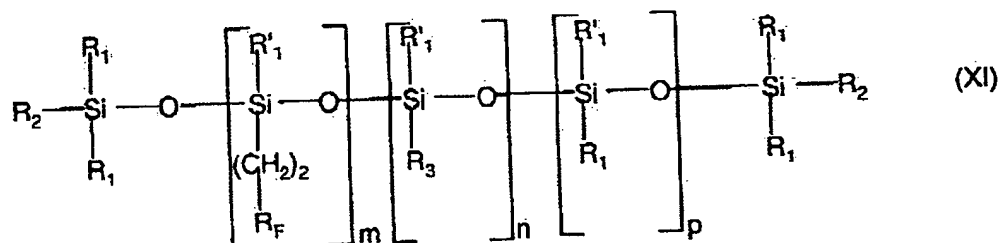
R₁ is chosen from hydrogen and C₁-C₆ alkyl radicals;

R₂ is chosen from C₁-C₆ alkyl radicals and -OSi(R₃)₃, R₃ being chosen from C₁-C₄ alkyl radicals.

108. The composition according to Claim 107, wherein the at least one fluoro oil is chosen from:

N-(2-F-octylethyloxycarbonyl)-3-aminopropylbis(trimethylsiloxy)methylsilane,
 N-(2-F-hexylethyloxycarbonyl)-3-aminopropylbis(trimethylsiloxy)methylsilane,
 N-(2-F-butylethyloxycarbonyl)-3-aminopropylbis(trimethylsiloxy)methylsilane,
 N-(2-F-octylethyloxycarbonyl)-3-aminopropyltris(trimethylsiloxy)silane,
 N-(2-F-hexylethyloxycarbonyl)-3-aminopropyltris(trimethylsiloxy)silane, and
 N-(2-F-butylethyloxycarbonyl)-3-aminopropyltris(trimethylsiloxy)silane.

109. The composition according to Claim 65, wherein the at least one fluoro oil is chosen from fluoroalkylsilicones of formula (XI):



wherein:

R_1 and R'_1 are independently chosen from linear and branched alkyl radicals containing from 1 to 6 carbon atoms, and phenyl radicals;

R_2 is chosen from R_1 , $-OH$, and $-(CH_2)_f-R_F$, f being an integer ranging from 0 to 10;

R_3 is chosen from linear and branched alkyl radicals containing from 6 to 22 carbon atoms;

R_F is chosen from $-(CF_2)_q-CF_3$, q being an integer ranging from 0 to 10;

m and n are independently chosen from an integer ranging from 1 to 50;

and

p is an integer ranging from 0 to 2,000.

110. The composition according to Claim 109, wherein:

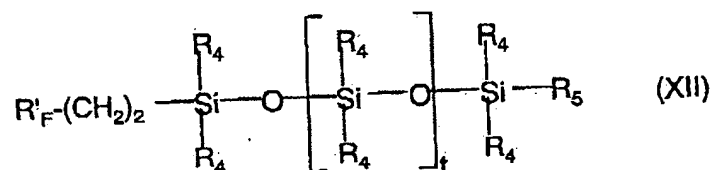
R_1 , R'_1 and R_2 are methyl radicals;

R_3 is chosen from linear alkyl radicals containing from 6 to 22 carbon atoms;

m and n are independently chosen from integers ranging from 1 to 20; and

q is an integer ranging from 0 to 3.

111. The composition according to Claim 65, wherein the at least one fluoro oil is chosen from fluoroalkylsilicones of formula (XII):



wherein:

R_4 is chosen from linear and branched alkyl radicals containing from 1 to 6 carbon atoms, and phenyl radicals;

R_5 is chosen from linear and branched alkyl radicals containing from 6 to 22 carbon atoms, and phenyl radicals;

R'_F is chosen from $-(CF_2)_s-CF_3$, wherein s is an integer ranging from 0 to 15; and

t is an integer ranging from 1 to 2,000.

112. The composition according to Claim 111, wherein:

R_4 is methyl;

R_5 is chosen from linear alkyl radicals containing from 6 to 22 carbon atoms; and

s is an integer ranging from 1 to 13.

113. The composition according to Claim 65, wherein the at least one fluoro oil is present in an amount ranging from 0.1% to 50% by weight, relative to the total weight of the composition.

114. The composition according to Claim 113, wherein the at least one fluoro oil is present in an amount ranging from 1% to 30% by weight, relative to the total weight of the composition.

115. The composition according to Claim 114, wherein the at least one fluoro oil is present in an amount ranging from 3% to 15% by weight, relative to the total weight of the composition.

116. The composition according to Claim 65, further comprising at least one additional oil, other than the said at least one fluoro oil.

117. The composition according to Claim 116, wherein the at least one additional oil comprises at least one volatile oil.

118. The composition according to Claim 117, wherein the at least one volatile oil is chosen from volatile hydrocarbon-based oils containing from 8 to 16 carbon atoms.

119. The composition according to Claim 117, wherein the at least one volatile oil is chosen from branched C₈-C₁₆ alkanes and branched C₈-C₁₆ esters.

120. The composition according to Claim 117, wherein the at least one volatile oil is chosen from C₈-C₁₆ isoparaffins and isododecane.

121. The composition according to Claim 65, wherein the at least one liquid fatty phase further comprises at least one additional non-volatile oil, other than the said fluoro oil.

122. The composition according to Claim 121, wherein the additional non-volatile oil is chosen from hydrocarbon-based oils of mineral, animal, plant, or synthetic origin, synthetic esters, ethers, and silicone oils.

123. The composition according to Claim 116, wherein the at least one additional oil is present in an amount ranging from 5% to 97.5% by weight, relative to the total weight of the composition.

124. The composition according to Claim 123, wherein the at least one additional oil is present in an amount ranging from 10% to 75% by weight, relative to the total weight of the composition.

125. The composition according to Claim 124, wherein the at least one additional oil is present in an amount ranging from 15% to 45% by weight, relative to the total weight of the composition.

126. The composition according to Claim 65, wherein the at least one liquid fatty phase further comprises an apolar oil in an amount ranging from greater than zero to 30% by weight, relative to the total weight of the at least one liquid fatty phase.

127. The composition according to Claim 126, wherein the apolar oil is present in an amount ranging from 50% to 100%, relative to the total weight of the at least one liquid fatty phase.

128. The composition according to Claim 65, wherein the at least one liquid fatty phase is present in an amount ranging from 5% to 99% by weight, relative to the total weight of the composition.

129. The composition according to Claim 128, wherein the at least one liquid fatty phase is present in an amount ranging from 20% to 75% by weight, relative to the total weight of the composition.

130. The composition according to Claim 65, further comprising at least one dyestuff.

131. The composition according to Claim 130, wherein the at least one dyestuff is chosen from lipophilic dyes, hydrophilic dyes, pigments, and naces.

132. The composition according to Claim 130, wherein the at least one dyestuff is present in an amount ranging from 0.01% to 50% by weight, relative to the total weight of the composition.

133. The composition according to Claim 132, wherein the at least one dyestuff is present in an amount ranging from 5% to 30% by weight, relative to the total weight of the composition.

134. The composition according to Claim 65, further comprising at least one additive chosen from water, antioxidants, essential oils, preserving agents, fragrances, fillers, waxes, fatty compounds that are pasty at room temperature, neutralizers,

polymers that are liposoluble or dispersible in the physiologically acceptable medium, cosmetic agents, dermatological active agents, and dispersants.

135. The composition according to Claim 65, further comprising at least one additional polymer that is liposoluble or dispersible in the physiologically acceptable medium, the at least one additional polymer being chosen from vinylpyrrolidone copolymers and C₃ to C₂₂ alkene copolymers.

136. A composition for caring for, treating, or making up a keratin material, comprising at least one liquid fatty phase comprising at least one fluoro oil, wherein the at least one liquid fatty phase is structured with at least one polymer with a weight-average molecular mass of less than or equal to 1,000,000, comprising:

a) a polymer skeleton comprising hydrocarbon-based repeating units, said units comprising at least one hetero atom; and

b) optionally at least one fatty chain chosen from at least one pendent fatty chain and at least one terminal fatty chain, wherein the at least one fatty chain comprises from 6 to 120 carbon atoms, is bonded to the hydrocarbon-based units, and is optionally functionalized, and

wherein the at least one liquid fatty phase and the at least one polymer form a physiologically acceptable medium.

137. A rigid gel comprising at least one liquid fatty phase comprising at least one fluoro oil, wherein the at least one liquid fatty phase is structured with at least one polymer with a weight-average molecular mass of less than or equal to 1,000,000, comprising:

a) a polymer skeleton comprising hydrocarbon-based repeating units, said units comprising at least one hetero atom; and

b) optionally at least one fatty chain chosen from at least one pendent fatty chain and at least one terminal fatty chain, wherein the at least one fatty chain comprises from 6 to 120 carbon atoms, is bonded to the hydrocarbon-based units, and is optionally functionalized, and

wherein the at least one liquid fatty phase and the at least one polymer form a physiologically acceptable medium.

138. The rigid gel according to Claim 137, wherein the gel is in the form of an anhydrous stick.

139. A product, chosen from mascara, eyeliner, a foundation, a lipstick, a blusher, a deodorant product, a make-up-removing product, a body make-up product, an eye shadow, a face powder, a concealer product, a shampoo, a conditioner, an antisen product, a bodycare product, a facial care product, and a nail varnish, the product comprising at least one liquid fatty phase comprising at least one fluoro oil, wherein the at least one liquid fatty phase is structured with at least one polymer with a weight-average molecular mass of less than or equal to 1,000,000, comprising:

a) a polymer skeleton comprising hydrocarbon-based repeating units, said units comprising at least one hetero atom; and

b) optionally at least one fatty chain chosen from at least one pendent fatty chain and at least one terminal fatty chain, wherein the at least one fatty chain comprises from 6 to 120 carbon atoms, is bonded to the hydrocarbon-based units, and is optionally functionalized, and

wherein the at least one liquid fatty phase and the at least one polymer form a physiologically acceptable medium.

140. A stick comprising at least one liquid fatty phase comprising at least one fluoro oil, the at least one liquid fatty phase being structured with at least one polymer with a weight-average molecular mass of less than or equal to 1,000,000, comprising:

a) a polymer skeleton comprising hydrocarbon-based repeating units, said units comprising at least one hetero atom; and

b) optionally at least one fatty chain chosen from at least one pendent fatty chain and at least one terminal fatty chain, the at least one fatty chain containing from 6 to 120 carbon atoms and being linked to the hydrocarbon-based units, the at least one fatty chain being optionally functionalized, and

wherein the at least one liquid fatty phase and the at least one polymer form a physiologically acceptable medium, and the stick having a hardness ranging from 30 to 300 gf.

141. A lipstick composition in stick form, comprising at least one liquid continuous fatty phase comprising at least one fluoro oil, wherein the at least one liquid fatty phase is structured with at least one non-waxy polymer, the lipstick having a hardness ranging from 30 to 300 gf, in the absence of wax.

142. The composition according to Claim 141, further comprising at least one additive chosen from fatty compounds that are pasty at room temperature, and liposoluble polymers.

143. A cosmetic process for caring for, making up or treating human keratin materials, comprising:

applying a cosmetic composition to keratin materials, in an amount effective to care for, make up or treat human keratin materials, the composition comprising at least one liquid fatty phase comprising at least one fluoro oil, wherein the at least one liquid fatty phase is structured with at least one polymer with a weight-average molecular mass of less than or equal to 1,000,000, comprising:

a) a polymer skeleton comprising hydrocarbon-based repeating units, said units comprising at least one hetero atom; and

b) optionally at least one fatty chain chosen from at least one pendent fatty chain and at least one terminal fatty chain, wherein the at least one fatty chain comprises from 6 to 120 carbon atoms, is bonded to the hydrocarbon-based units, and is optionally functionalized, and

wherein the at least one liquid fatty phase and the at least one polymer form a physiologically acceptable medium.

144. A process for reducing the transfer and/or deposit of traces of a film and/or to improve the staying power of the film and/or to obtain a non-sticky film of a cosmetic composition, applied to keratin materials, onto a support placed in contact with said film, comprising:

including at least one polymer in at least one liquid fatty phase comprising a fluoro oil, the at least one polymer having a weight-average molecular mass of less than or equal to 1,000,000 and comprising:

a) a polymer skeleton comprising hydrocarbon-based repeating units, said units comprising at least one hetero atom; and

b) optionally at least one fatty chain chosen from at least one pendent fatty chain and at least one terminal fatty chain, wherein the at least one fatty chain comprises from 6 to 120 carbon atoms, is bonded to the hydrocarbon-based units, and is optionally functionalized, and

wherein the at least one liquid fatty phase and the at least one polymer form a physiologically acceptable medium.

145. The process according to Claim 144, wherein the at least one polymer is a polyamide having end groups comprising an ester group, the ester groups comprising a hydrocarbon-based chain containing from 10 to 42 carbon atoms.

146. A two-product composition, for forming a two-coat care treatment or make-up, the product comprising at least one liquid fatty phase comprising at least one fluoro oil, wherein the at least one liquid fatty phase is structured with at least one polymer with a weight-average molecular mass of less than or equal to 1,000,000, comprising:

a) a polymer skeleton comprising hydrocarbon-based repeating units, said units comprising at least one hetero atom; and

b) optionally at least one fatty chain chosen from at least one pendent fatty chain and at least one terminal fatty chain, wherein the at least one fatty chain comprises from 6 to 120 carbon atoms, is bonded to the hydrocarbon-based units, and is optionally functionalized, and

wherein the at least one liquid fatty phase and the at least one polymer form a physiologically acceptable medium.